BEGINNINGS OF WATER PLANNING

Texas Has Traditionally Been an Agriculture State

The Dust Bowl and Drought of the 50's Significantly Affected Texas

First Plan Adopted in 1961

- Largely Relied on Reservoirs

Famous Plan Adopted in 1968

- Proposed moving water from Mississippi River

Followed a Top Down Planning Philosophy

Most Water Planning in Texas Focused More on Surface Water & Cities Historically

Until 1997 Water Planning was Done From the Top Down

MODERN WATER PLANNING

SB 1 of 75th TX Legislature (1997)

- In Response to State Drought & Changing Demographics
- Created bottom up water planning process
- Allocated Monies to Regions for Planning
- Ensured Broad Planning Representation

Regional Plans Adopted Every 5 Years

- 2001, 2006, 2011, 2016

Compiled into A State Plan

- 2002, 2007, 2012, 2017

Regional Groups Identify

- Engineers, Modelers, Economists, Etc.

FUNDAMENTALLY – WATER PLANNING DOES WHAT?

- Assesses Where Water Is
- Assesses Where Water Is Being Used
- Establishes a Long Term Goal for Water Resources
- Identifies Where Shortages May Be
- Defines Strategies to Address Shortages

LOCAL INFORMATION

Region A – Panhandle Water Planning Group

C.E. Williams, Chair

PRPC Serves as Administrative Agent

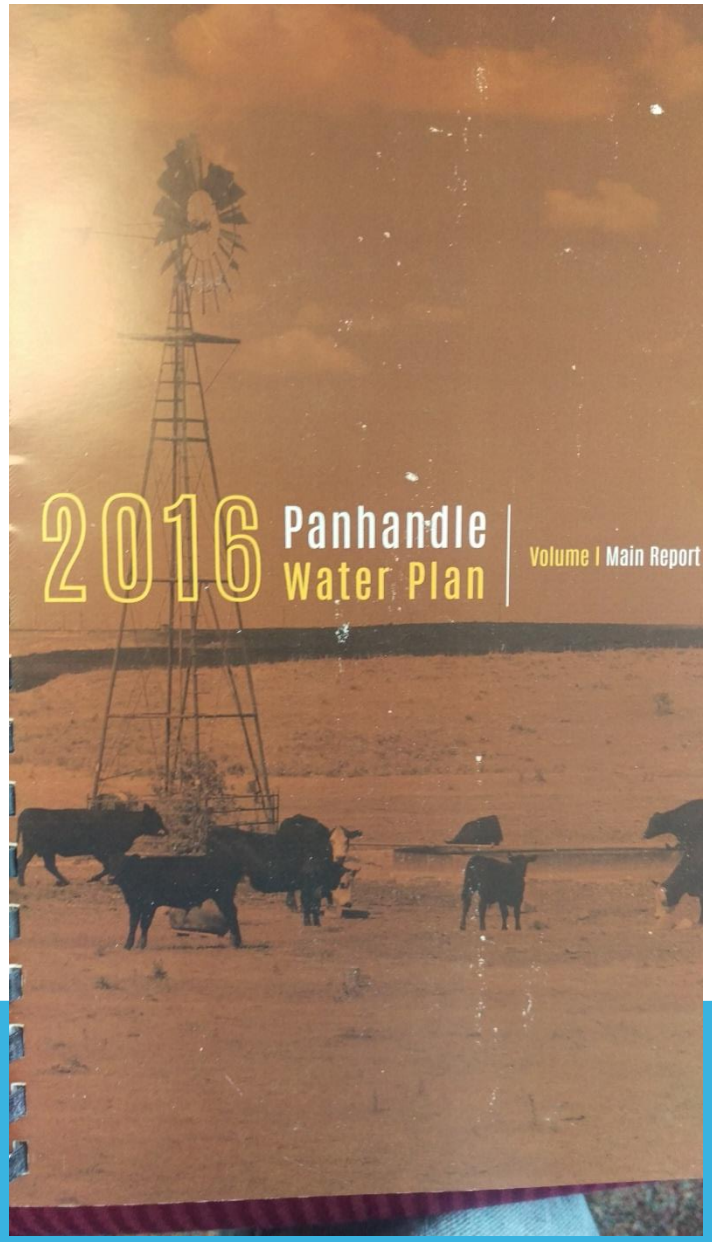
Kyle Ingham
Local Government Services Director
(806) 372-3381

Contractor is Freese & Nichols Inc.

Simone Kiel

Water resources Planning Associate

(817) 735-7446



CHAPTER 1 – PLANNING AREA DESCRIPTION

21 Counties

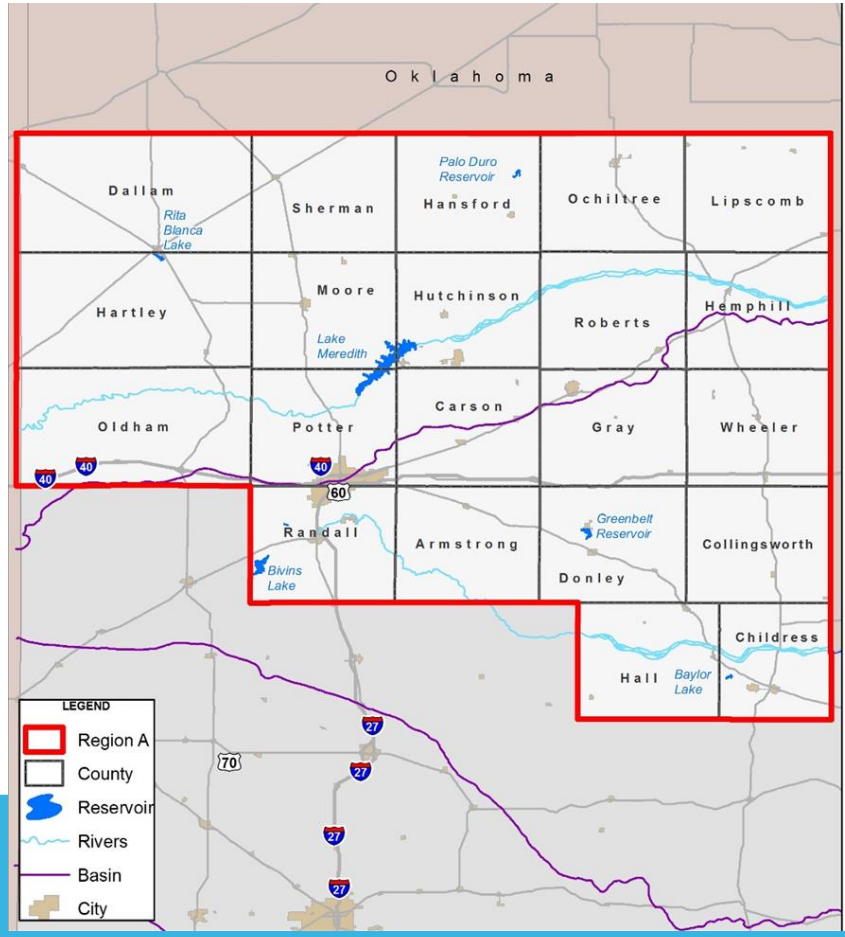
Canadian and Red River Basins

- 3 major reservoirs

2 major and 3 minor aquifers

Economic Drivers

- Agribusiness
- Manufacturing
- Energy
- Tourism



CHAPTER 2 – POPULATION AND DEMANDS

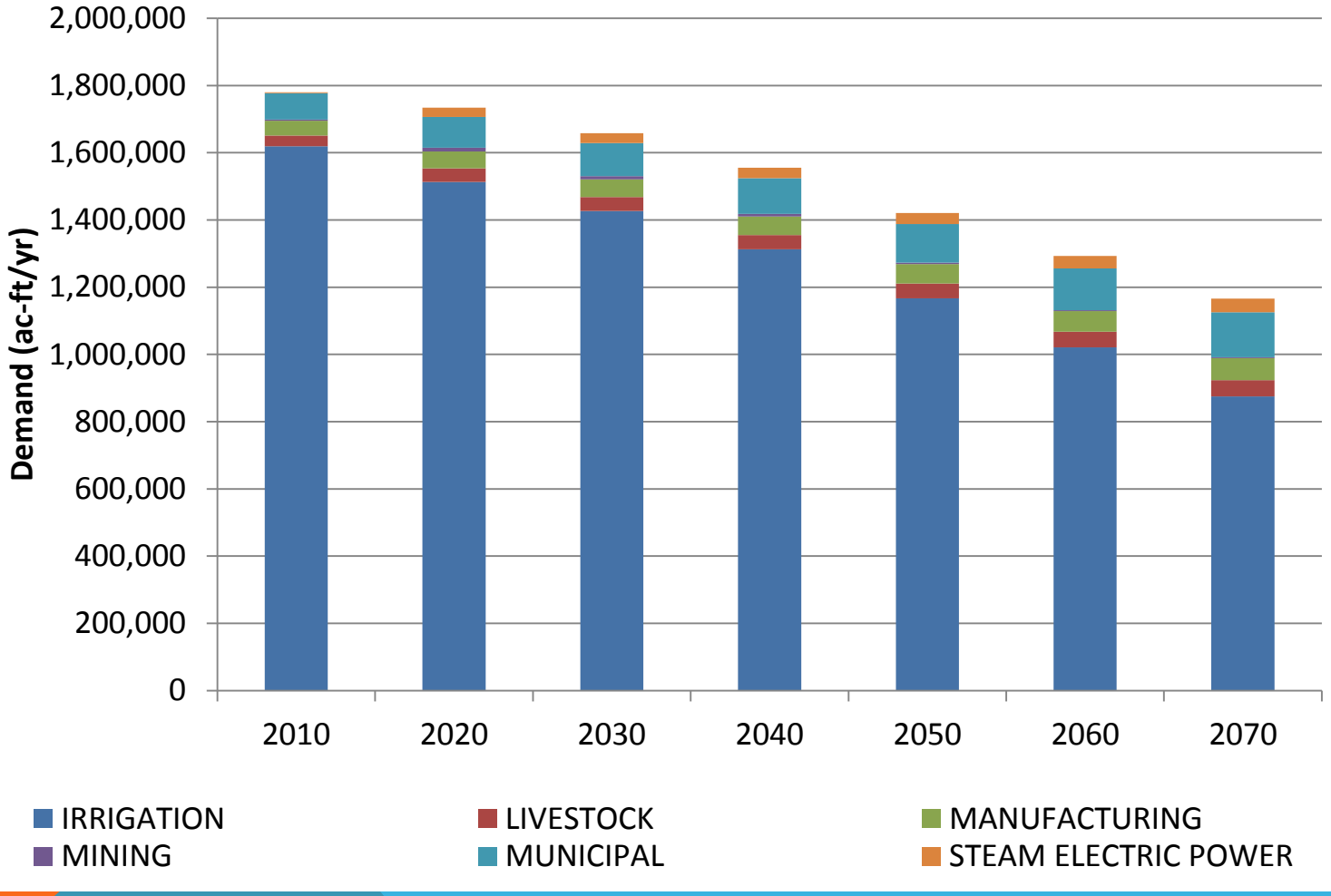
Water User Groups

- Municipal – population> 500
- Irrigation
- Livestock
- Manufacturing
- Mining
- Steam Electric Power

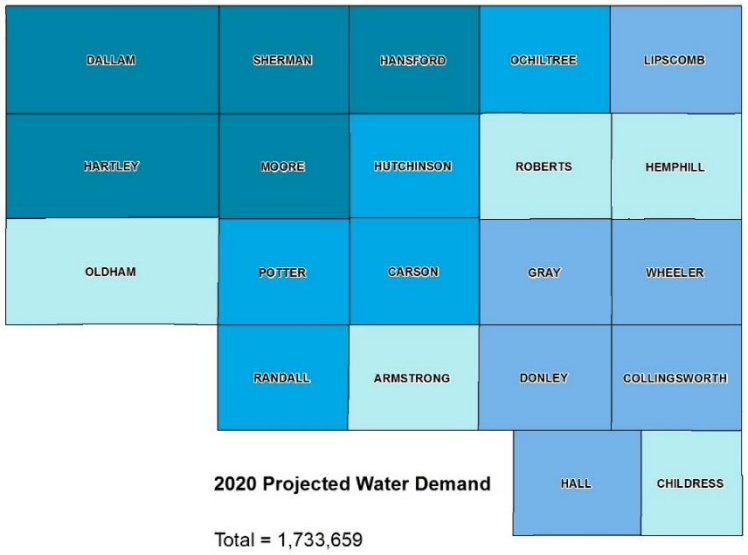
Wholesale Water Providers

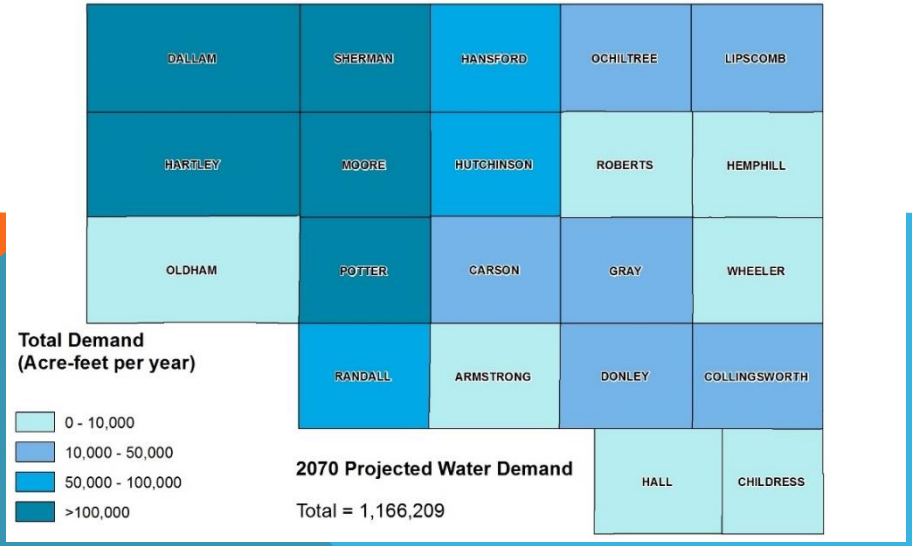
- CRMWA
- Greenbelt M&IWA
- Palo Duro RA
- Amarillo
- Borger
- Cactus

CHAPTER 2 – WATER DEMANDS

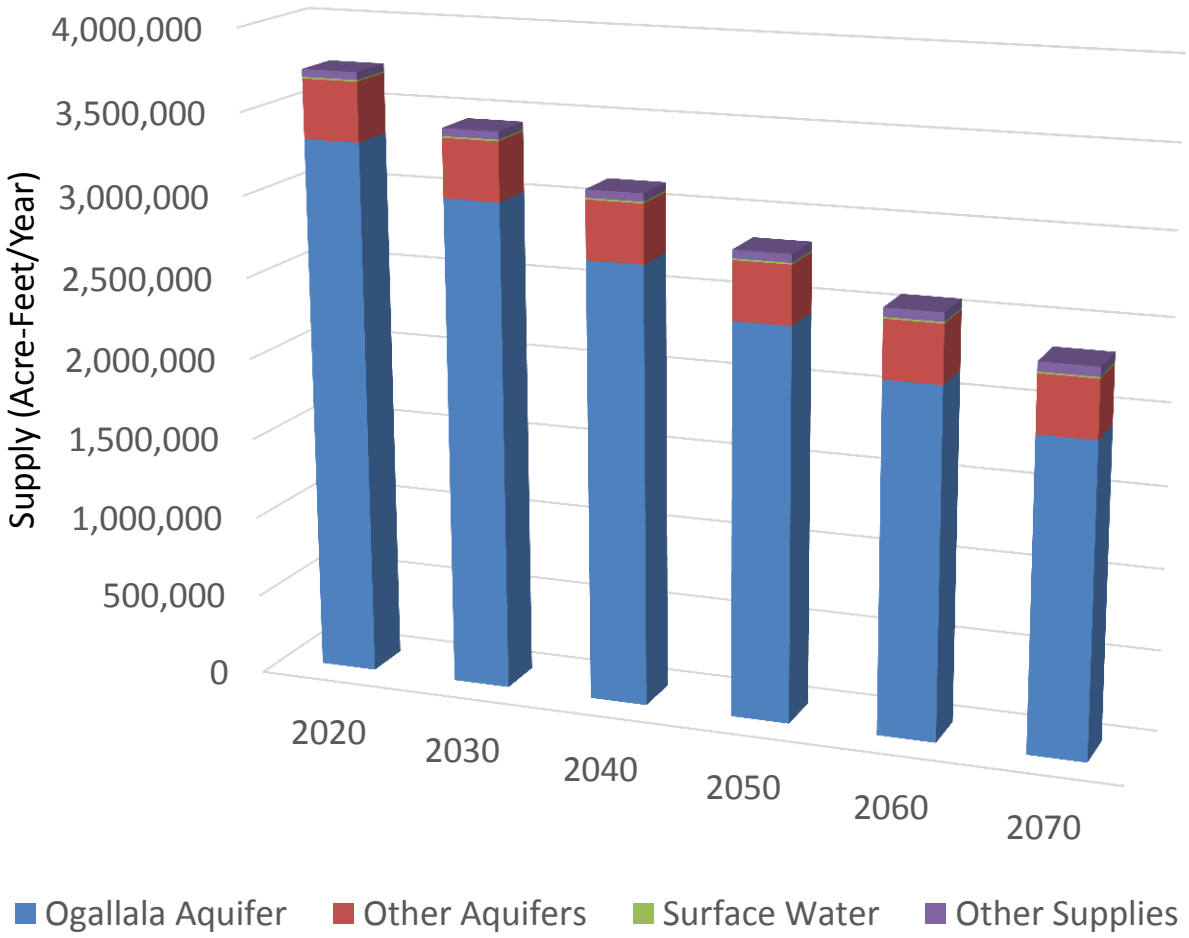


CHAPTER 2 – WATER DEMANDS





CHAPTER 3 – WATER SUPPLIES



Groundwater accounts for over 97% of supplies in the PWPA

Surface water supplies have been greatly impacted by on-going drought conditions

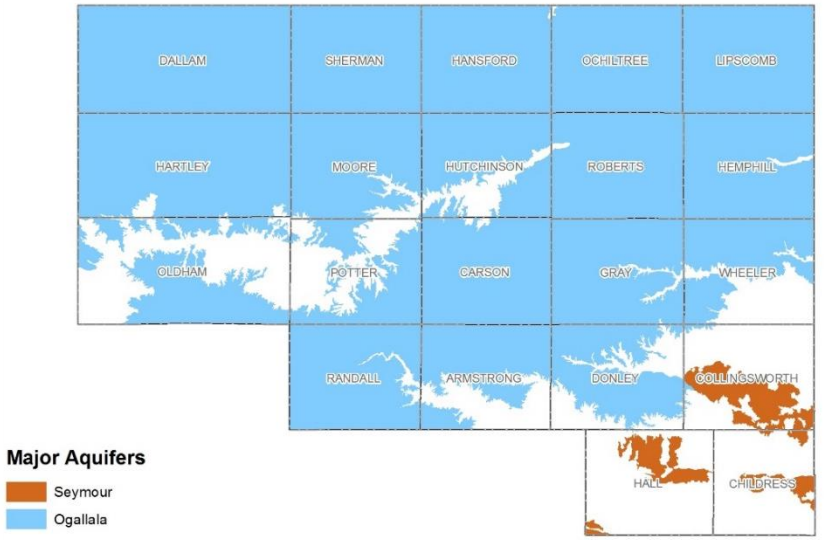
CHAPTER 3 – WATER SUPPLIES

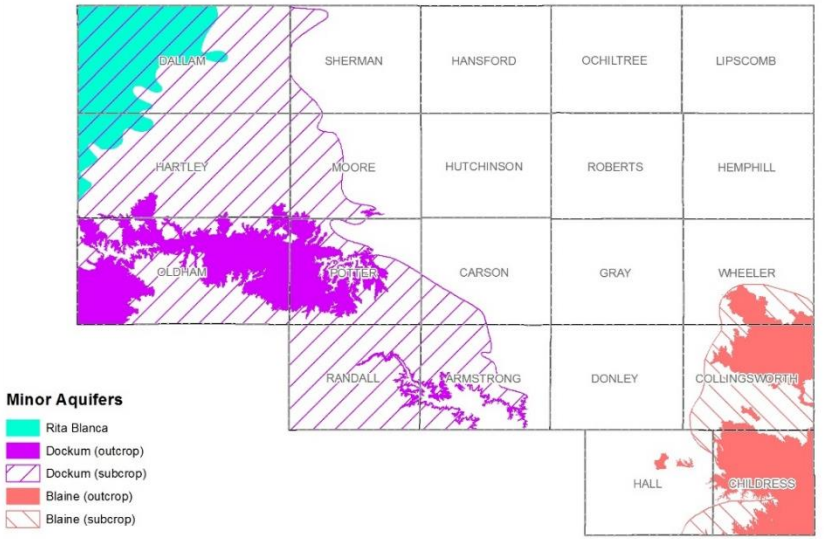
2 Major Aquifers:

- Ogallala
- Seymour

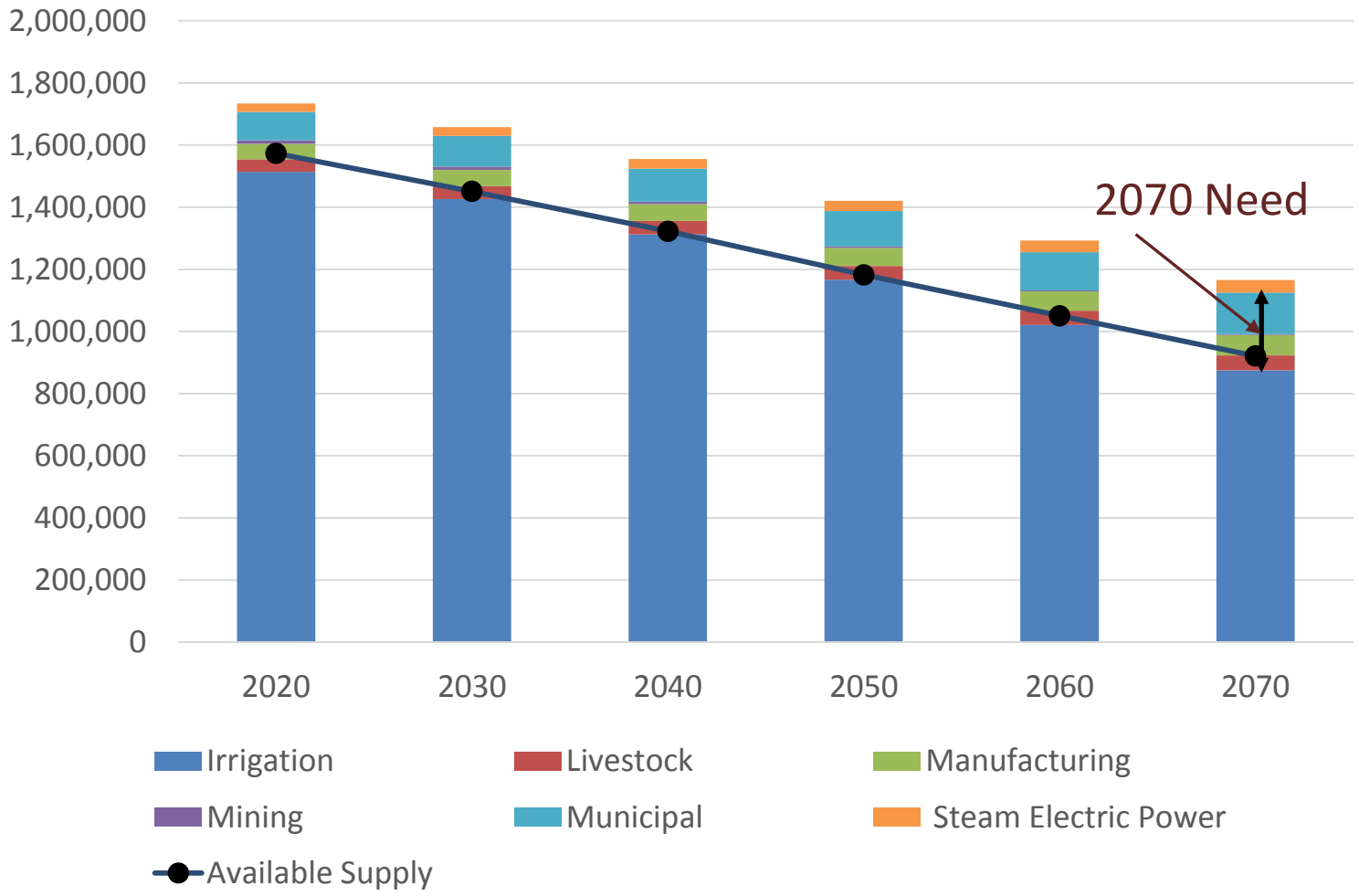
3 Minor Aquifers:

- Rita Blanca
- Dockum
- Blaine





CHAPTER 4 – IDENTIFICATION OF WATER NEEDS



CHAPTER 4 – IDENTIFICATION OF WATER NEEDS

PROJECTED WATER NEEDS

	2020	2030	2040	2050	2060	2070
Irrigation	156,704	185,043	192,876	180,151	165,133	148,520
Livestock	0	0	0	0	0	0
Manufacturing	4,017	6,986	10,048	14,242	18,369	22,538
Mining	0	0	0	0	0	0
Municipal	9,551	23,600	37,971	52,058	66,265	80,969
Steam Electric Power	0	0	0	0	0	0
TOTAL	170,272	215,629	240,896	246,451	249,768	252,027

CHAPTER 5 - WATER MANAGEMENT STRATEGIES

Conservation

Reuse

Voluntary Transfer (Sales)

New/Expanded use of groundwater resources

Brush Control

Conjunctive Use

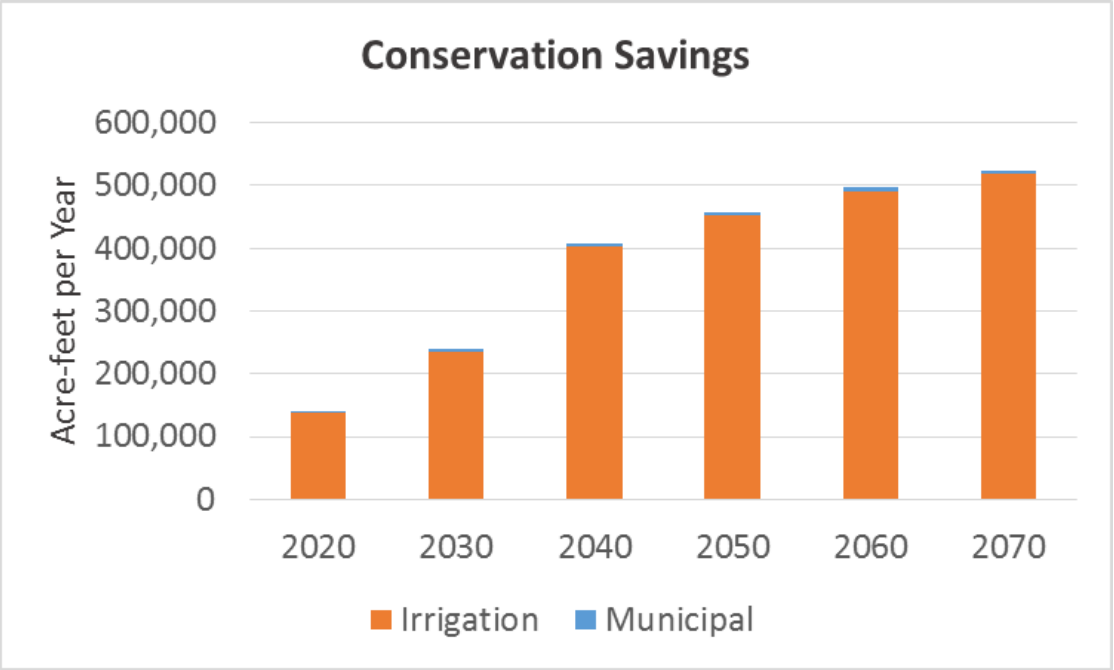
Advance Treatment (Nitrate Removal)

Precipitation Enhancement

CONSERVATION

Recommended for:

- All municipalities (cities)
- County-Other with needs
- All irrigation users



REGIONAL STRATEGIES

Brush Control

- CRMWA (Lake Meredith Watershed)

Precipitation Enhancement

- Counties with an active program

WHOLESALE WATER PROVIDER STRATEGIES

6 wholesale water providers in PWPA

- CRMWA
  - Conservation – Well Capacity – CRMWA II – Conjunctive Use – Brush Control
- Amarillo
  - Conservation – CRMWA Supplies – Potter County Phase II – Other Well Fields
- Greenbelt MIWA
  - Conservation – Donley County Well Expansion
- Borger
  - Conservation – CRMWA Supplies – Hutchinson County Well Expansion
- Cactus
  - Conservation – Ogallala Well Field – Lake Palo Duro Project
- Palo Duro River Authority
  - Lake Palo Duro Project

CHAPTER 6 – IMPACTS OF THE RWP

Demonstrates how this plan is consistent with long-term protection of the state's resources

- Protection of water quality
- Impacts of moving water from agricultural and rural areas
- Protection of agricultural resources
- Protection of natural resources
  - Threatened and Endangered Species
  - Parks and Public Lands
  - Energy Reserves
- Protection of Public Health and Safety
- Consistency with Economic Development
- Consistency with TWDB rules for Regional Water Planning

CHAPTER 7 – DROUGHT RESPONSE

New drought of record in the Region

- On-going

Drought triggers

- Surface water – follows triggers in DCP of owner
- Groundwater – Palmer Drought Severity Index

Emergency Interconnects

Emergency Response to Drought

OTHER CHAPTERS

- *Chapter 8 – Legislative Recommendations*
- *Chapter 9 – Infrastructure Financing Report*
- *Chapter 10 – Public Adoption and Public Participation*

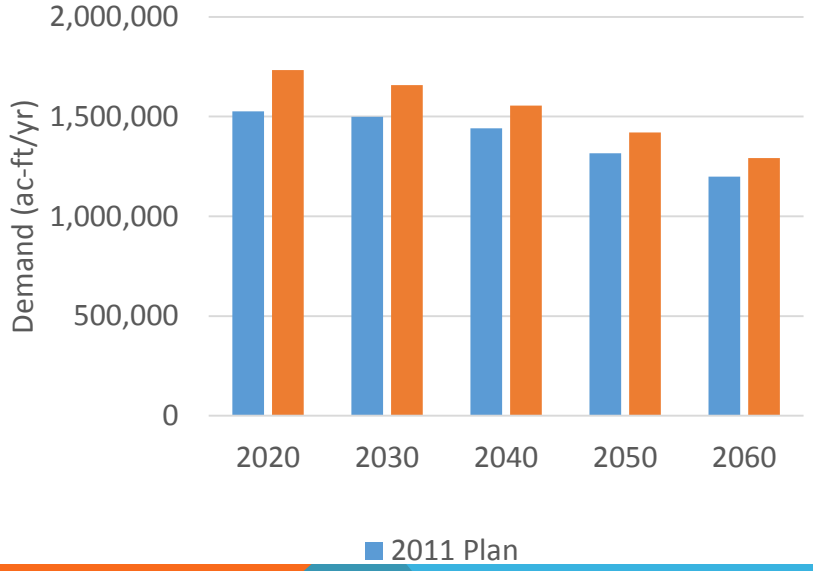
CHAPTER 11

New chapter

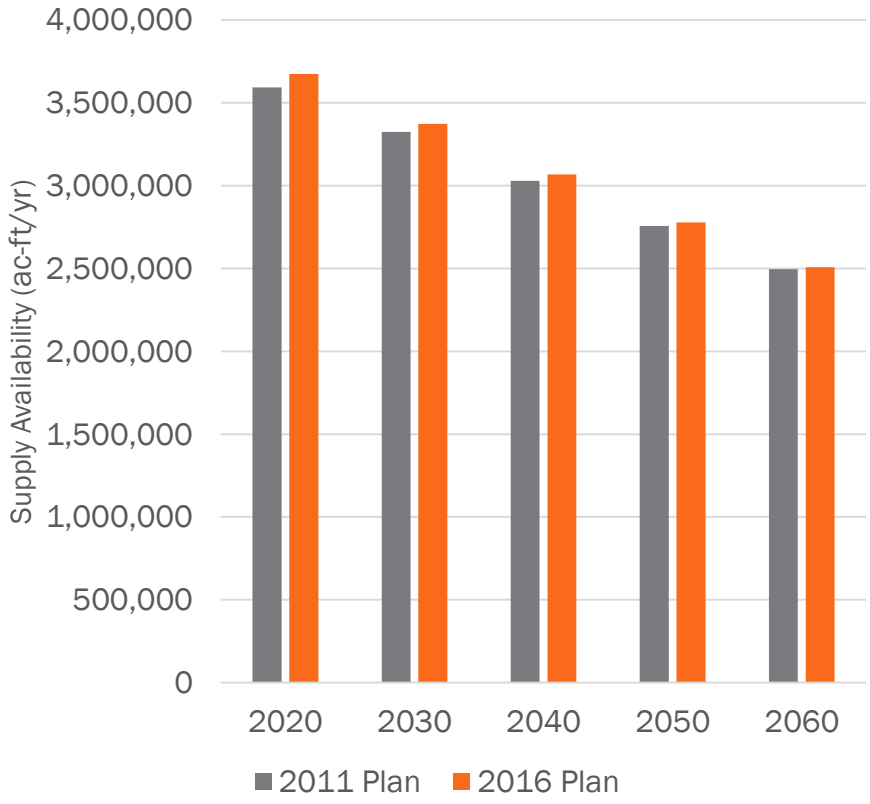
Implementation and Comparison to Previous Regional Water Plan

Captures the changes in region

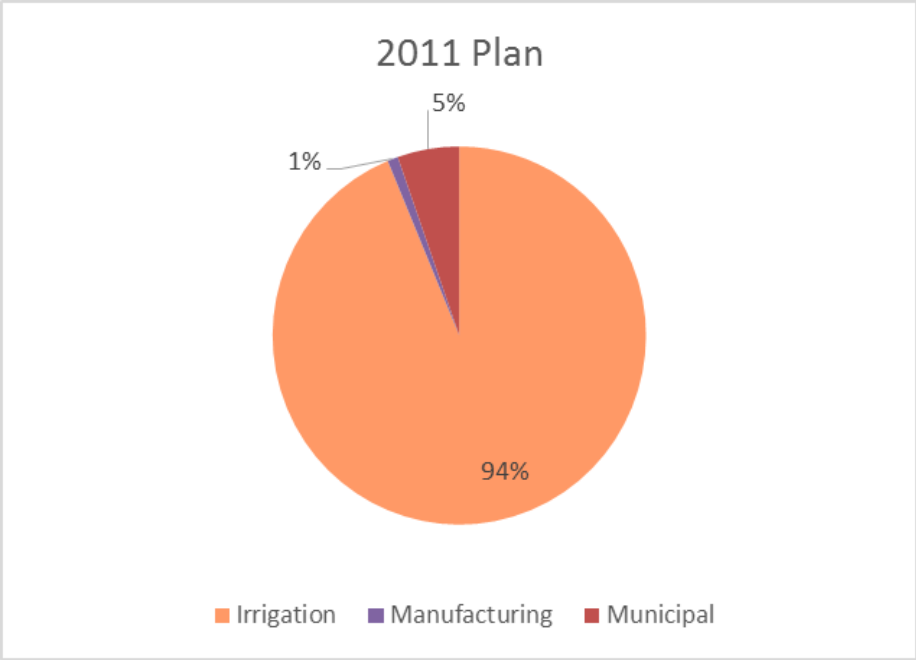
Total Demand



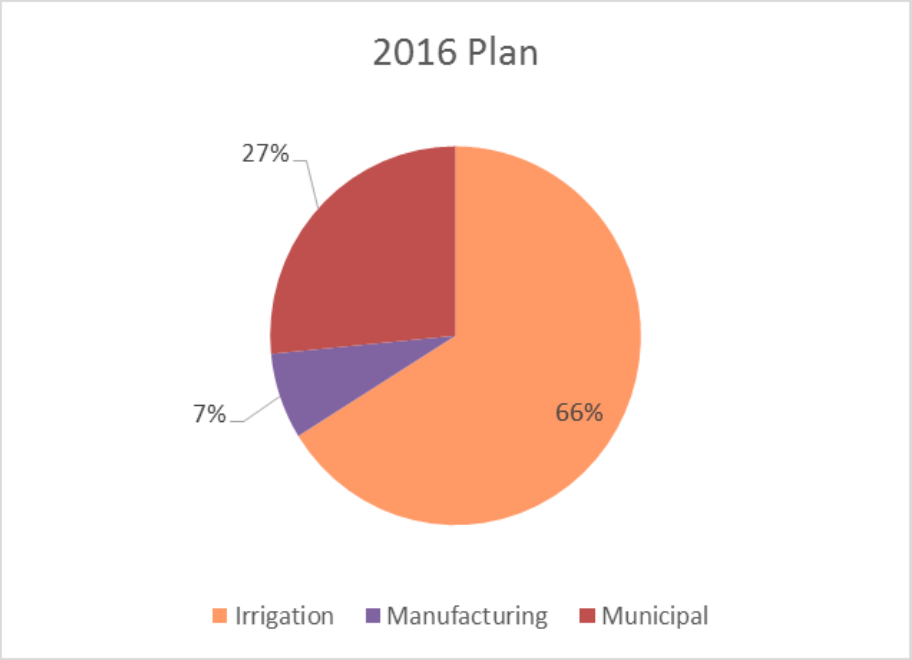
Groundwater Availability



2060 NEEDS BY USE TYPE



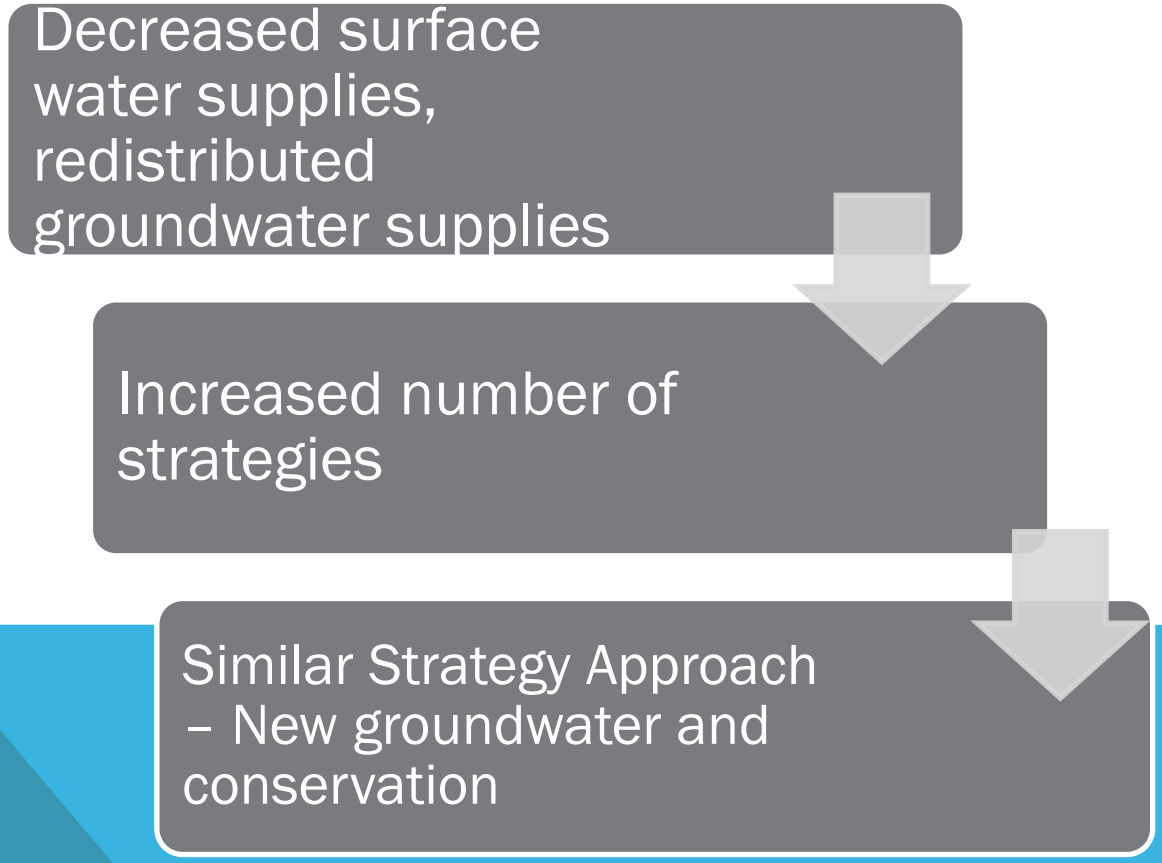
462,230 AF/Y



249,768 AF/Y

CHAPTER 11 – COMPARISON TO PREVIOUS REGIONAL WATER PLAN

Similar Plans with Differences



QUESTIONS & ANSWERS

C.E. Williams

Chairman, PWPW (REGION A)

General Manager, PGCD

(806) 883-2501

cew@pgcd.us

Kyle G. Ingham

Local Government Services Director

Panhandle Regional Planning Commission

(806) 372-3381

kingham@theprpc.org